

Claims

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1. (Amended) An information recording medium comprising a substrate on which at least a recording film which undergoes change in atomic arrangement upon irradiation with recording beams and a protective film comprising a dielectric are formed, said recording film and said protective film being formed in contact with each other, wherein nitrogen contents on both sides of interface at which the recording film and the protective film contact with each other is such that the nitrogen content of the protective film side is greater than that of the recording film side and the changing amount of the nitrogen content in the direction of thickness of the film with the interface between the films as a boundary is 1-50 at.%/nm.

2. (Amended) An information recording medium according to claim 1, wherein the protective film contains a sulfide and the nitrogen content in the protective film is not more than 25 at.%, and the recording film contains an element which bonds to sulfur to form a sulfide or an element which produces a barrier layer inhibiting diffusion of sulfur.

3. (Amended) An information recording medium according to claim 2, wherein the recording film contains 0.1-10 at.% of at least one element selected from the group consisting of Si, P, V, Mn, Fe, Co, Ni, Cu, Zn, Nb, Mo, Ru, Rh, Pd, Ag, Cd, Sn, Ta, Os, Ir, Pt, Au, Tl, Pb, Bi

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and Cr.

4. (Amended) An information recording medium according to claim 2, wherein the recording film contains 0.1-10 at.% of at least one element selected from the group consisting of Co, Pd, Ag, Ta, Pt, Au, Tl and Cr.

5. (Amended) An information recording medium according to claim 2, wherein the recording film contains 0.1-10 at.% of Ag.

6. (Amended) An information recording medium according to claim 5, wherein the recording film contains Ge-Sb-Te based material.

7. (Amended) An information recording medium according to claim 2, wherein the protective film contains zinc sulfide.

8. (Amended) An information recording medium according to claim 2, wherein the protective film contains a mixture of zinc sulfide and silicon dioxide.

9. (Deleted)

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